IN THE SPECIFICATION

Please amend the paragraphs of the specification as follows:

Please replace paragraph 1 on page 1 with the following amended paragraph:

BACKGROUND ~~OF THE INVENTION~~

I.   Field ~~of the Invention~~

The ~~present invention~~ disclosed embodiments pertain[[s]] generally to the field of wireless communications, and more specifically to providing an efficient method and apparatus for transmitting time-sensitive information in a wireless voice-over-data communication system.

Please replace paragraph 4 on page 3 with the following amended paragraph:

SUMMARY ~~OF THE INVENTION~~

The ~~present invention is~~ detailed embodiments include a method and apparatus for efficient data transmission in a wireless voice-over-data communication system, thereby reducing latency associated with such a communication system. Specifically, this is achieved by defining a minimum segment size and a maximum segment size, thereby allowing both larger and smaller segments to be transmitted as data becomes available for transmission.

Please replace paragraph 5 on page 3 with the following amended paragraph:

In ~~the exemplary~~ one embodiment, TCP segments are used for transmitting time-sensitive information, generally audio information, using an asynchronous data format in accordance with IS-707.4 and UDP segments are used for transmitting audio information using a packet data format in accordance with IS-707.5. In a first embodiment of the present invention, a first segment size and a second segment size are chosen. The first segment size represents a minimum segment size that can be transmitted. The second segment size represents a maximum segment size that can be transmitted. A segment is generated and transmitted whenever a quantity of time-sensitive information available for transmission allows a segment to be constructed having a segment size between the minimum segment size and the maximum

segment size. A segment of any size up to the maximum segment size is also created and transmitted whenever any time-sensitive information is available for transmission and an acknowledgement message is received by the transmitter.

Please replace paragraph 1 on page 4 with the following amended paragraph:

In a second embodiment ~~of the present invention~~, segments are created and transmitted at predetermined time intervals, generally with respect to a number of vocoder frames available for transmission. This embodiment is inopposite to prior art data protocols in that segments are transmitted at regular time intervals, rather than being dependent upon filling the segment with a minimum number of bytes before a transmission can take place.

Please replace paragraph 3 on page 4 with the following amended paragraph:

FIG. 1 illustrates a first embodiment ~~of the present invention~~ as used within a transmitter used in a voice-over-data communication system;

FIG. 2 illustrates how variable-rate vocoder frames are converted into TCP segments by a TCP processor used in the transmitter of FIG. 1; and

FIG. 3 is a flow diagram detailing the method of the first embodiment ~~of the present invention~~.

Please replace paragraph 2 on page 6 with the following amended paragraph:

Vocoders may be further enhanced by encoding data frames at variable data rates. An example of such a variable rate vocoder is found in United States patent number 5,414,796 (the '796 patent) entitled "VARIABLE RATE VOCODER", assigned to the same assignee ~~of the present invention~~ and incorporated by reference herein. When little or no information is available for transmission, variable rate vocoders produce data frames at reduced data rates, thus increasing the transmission capacity of the wireless communication system. In the variable rate vocoder described by the '796 patent, data frames comprise data at either full, one half, one quarter, or one eighth the data rate of the highest vocoder encoding rate.

Please replace paragraph 2 on page 8 with the following amended paragraph:

In one embodiment ~~the present invention~~, two segment sizes are defined. A first segment size represents a minimum segment size that can be transmitted. A second segment size represents a maximum segment size that can be transmitted. The second segment size is equivalent to the prior art segment size, and is negotiated between a transmitter and a receiver prior to the start of communications. The first segment size is predefined and stored in a memory **112** within transmitter **100**.

Please replace paragraph 1 on page 9 with the following amended paragraph:

The ~~present invention~~ disclosed embodiments minimize[[s]] the problems of latency caused by discontinuous transmission of data awaiting to be transmitted in queue **106**. In prior art systems, data was not transmitted until the predetermined queue size was met. A relatively large amount of time could transpire before enough data filled queue **106** with enough data to satisfy the predetermined minimum segment size. Therefore, relatively large delays could be introduced into the transmission of time-sensitive data. The ~~present invention~~ disclosed embodiments minimize[[s]] this latency by using a two size segment approach. The minimum segment size allows TCP segments to be generated more quickly, thus at a more regular rate. Vocoder frames awaiting transmission in queue **106** are transmitted more quickly due to the smaller amount of data needed to create a segment. A second advantage of the two segment size approach is that larger segments can be transmitted when a large amount of data is generated and stored in queue **106**. In this case, segments are created having a segment size equal to the maximum segment size. This allows more efficient processing and reduces the overhead associated with generating many TCP segments.

Please replace paragraph 1 on page 10 with the following amended paragraph:

When an acknowledgment message is received by a transmitter, it indicates that the transmission channel quality between the transmitter and a receiver is good and that the chance for errors in transmission is low. In one embodiment ~~the present invention~~, when an acknowledgment message is received by transmitter **100**, processor **110** instructs TCP processor to generate a TCP segment, no matter how much data is stored in queue **106**. Therefore, TCP segments can be created having a segment size less than the minimum segment size, up to a maximum size of the maximum segment size.

Please replace paragraph 2 on page 10 with the following amended paragraph:

In a second embodiment ~~of the present invention~~, TCP segments are created and transmitted at predetermined time intervals, generally with respect to a number of vocoder frames available for transmission. This embodiment is inopposite to prior art data protocols in that segments are transmitted at regular time intervals, rather than being dependent upon filling the segment with a minimum number of bytes before a transmission can take place.

Please replace paragraph 4 on page 10 with the following amended paragraph:

In a third embodiment ~~of the present invention~~, in a transmitter that uses a variable rate vocoder, bits are added to low-rate vocoder frames in order to decrease the ratio of maximum vocoder frame size to minimum vocoder frame size. Testing has shown that as this ratio is decreased, certain audio distortions are reduced or eliminated, such as syllable dropouts at the start of sentences.

Please replace paragraph 1 on page 11 with the following amended paragraph:

FIG. **3** is a flow diagram detailing the method of the first embodiment ~~of the present invention~~. In step **300**, communications are initiated between a transmitter and a receiver. As part of the initialization process, a data protocol is negotiated between the transmitter and the receiver, such as TCP or UDP. In some protocols, such as TCP, a maximum segment size is negotiated between the transmitter and the receiver as well. The negotiation process is well-known in the art. The maximum segment size defines the largest segment size that will be

transmitted to the receiver. In many data protocols, segments having a smaller segment size are permitted to be transmitted as well. In addition to a maximum segment size, a minimum segment size is predefined and stored within a memory at the transmitter as well. The minimum segment size is generally not negotiated between the transmitter and the receiver.

Please replace paragraph 3 on page 12 with the following amended paragraph:

The ~~preferred~~ <u>disclosed</u> embodiments ~~of the present invention~~ have thus been shown and described. It would be apparent to one of ordinary skill in the art, however, that numerous alterations may be made to the embodiments herein disclosed without departing from the spirit or scope of the invention. Therefore, the present invention is not to be limited except in accordance with the following claims.